



Cancer Imaging: The Need to Improve Utilisation Management



Variation in provider ordering preferences and lapses in care coordination are key factors affecting high-cost cancer imaging utilisation, according to a study published in *Journal of Cancer Policy*. In particular, high-ordering oncologists were found to be substantial drivers of imaging utilisation, with 58 percent more per patient imaging than their peers.

See Also: [Radiologists are the Stewards of Appropriate Imaging](#)

The study was conducted at a U.S. academic cancer centre and covered 4,605 patients with 29,740 tomographic imaging studies ordered by oncologists. CT accounted for 67.5 percent of tomographic imaging ($n = 20,083$), MR accounted for 19.5 percent ($n = 5,782$), and PET accounted for 13 percent ($n = 3,875$). Patients' dates of death ranged from January 2000 through December 2014. Outcome variables were total imaging per patient and total imaging per patient by a single oncologist.

The retrospective analysis of imaging utilisation yielded the following results:

- Patients with imaging ordered by one of the high-ordering medical oncologists predicted nearly a two-fold increase in total images from diagnosis to death (IRR, 1.93; 95% CI, 1.67–2.23).
- Increasing numbers of providers (2, 3, 4+ ordering oncologists) were associated with greater collective per patient imaging (IRRs 1.65, 2.19, 2.33).
- Mean imaging intensity increased in a linear manner as temporal proximity to death decreased, from 12 months pre-mortem to death, and imaging in the final year of life was associated with greater per patient imaging (IRR, 0.25; 95% CI, 0.23–0.27).

Greater total collective per patient imaging in larger combinations of ordering oncologists support the notion provider behaviours and interactions account for substantial variability in imaging utilisation and treatment intensity, according to researchers.

Despite controlling for time from diagnosis to death, patients diagnosed with more advanced cancers, who also have a shorter survival time, still appeared to have more total individual and collective imaging. The researchers also noted that a lack of care coordination appeared to have an effect on the total number of high-cost images a patient received between diagnosis and death. They suggest using virtual workspaces for collaboration may facilitate improved information sharing between oncologists, as well as other providers.

"The findings of this study demonstrate the salience of imaging utilisation management in the larger effort to

bend the cancer cost curve, but it is not as clear which stakeholders (i.e., payers, medical centres, or the government) are best equipped to transform provider imaging practices," write study authors Timothy P. Copeland, MPP and Benjamin L. Franc, MD, of the Department of Radiology and Biomedical Imaging, University of California in San Francisco.

Source: Journal of Cancer Policy
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